

TROPICAL RAINFALL MEASURING MISSION

March 26, 2001 – April 1, 2001

DOY 085 - 091

Day of Mission 1215 - 1221

TRMM MISSION OPERATIONS

- TRMM is flying in the +X Forward direction as of March 12th (01-071) at 19:23:40z.
- Yaw maneuver #55 to -X Forward is currently scheduled for April 5th (01-095).
- Delta-V #291 is scheduled for April 2nd (01-092), using the LBS thrusters.
- The Beta angle range for 01-092 to 01-098 is 16.2° to -7.7°.
- The next Monthly Status Review (MSR) is scheduled for April 25th (01-115).
- The next Configuration Control Board (CCB) meeting is scheduled for April 26th (01-116).
- The End of Life Preliminary Review is scheduled for April 19th (01-109).

TRMM SUBSYSTEM OPERATIONS

Attitude Control System (ACS)

Maneuver frequency has temporarily increased due to a large increase in Solar Activity and should begin to subside on or about Wednesday, April 6th. For more information please see, the Space Weather website at <http://www.spaceweather.com>.

01-086 (Tuesday, March 27th)

Delta-V maneuver #288 was successfully conducted at 15:43:11z and 16:28:46z for durations of 39.250 and 23.625 seconds respectively, using the LBS thrusters. The off-modulation of the -Yaw thruster (#1) for burn 1 was 6.4% (93.6% on time). The off-modulation of the +Pitch thruster (#2) for burn 1 and 2 was 25.8% and 29.1% (74.2% and 70.9% on time). The remaining fuel is 441.223 kg, the current N2 pressure is 864.843 psia, and the final apogee and perigee height is 354.67 km x 347.45 km.

01-088 (Thursday, March 29th)

Delta-V maneuver #289 was successfully conducted at 14:56:00z and 15:42:00z for durations of 40.500 and 22.625 seconds respectively, using the LBS thrusters. The off-modulation of the -Yaw thruster (#1) for burn 1 was 9.0% (91.0% on time). The off-modulation of the +Pitch thruster (#2) for burn 1 and 2 was 25.0% and 26.5% (75.0% and 73.5% on time). The remaining fuel is 439.728 kg, the current N2 pressure is 857.812 psia, and the final apogee and perigee height is 354.75 km x 347.59 km.

01-090 (Saturday, March 31st)

Delta-V maneuver #290 was successfully conducted at 15:40:47z and 16:26:30z for durations of 38.125 and 21.000 seconds respectively, using the LBS thrusters. The off-modulation of the -Yaw thruster (#1) for burn 1 was 2.0% (98.0% on time). The off-modulation of the +Pitch thruster (#2) for burn 1 and 2 was 26.9% and 20.3% (73.1% and 79.7% on time). The remaining fuel is 438.307 kg, the current N2 pressure is 843.750 psia, and the final apogee and perigee height is 354.64 km x 347.43 km.

Flight Data System (FDS)/Command & Data Handling (C&DH)

01-083 (Saturday, March 31st)

The UTCF was adjusted by -846.0 μ s, the current UTCF is 31535996.827426 seconds and the current drift value is -74.0 μ s. The Frequency Standard remains at x'7BA' with a current drift rate of -3.199 μ s/hr.

Reaction Control Subsystem (RCS)

The RCS subsystem performed nominally during this period. See the ACS section for specific Delta-V information.

Power Subsystem

The Power subsystem performed nominally during this period.

Electrical Subsystem

The Electrical subsystem performed nominally during this period.

Thermal Subsystem

The Thermal subsystem performed nominally during this period.

Deployables Subsystem

The Deployables subsystem performed nominally during this period.

RF/Communications Subsystem

The RF/Communications subsystem performed nominally during this period.

SPACECRAFT INSTRUMENTS

CERES

No change in the status of CERES. The Data Acquisition Processor (DAP) does not produce valid telemetry (the telemetry is either railed at the high or low values), and the DAA +15V converter is no longer in voltage regulation.

LIS

The LIS instrument performed nominally during this period.

PR

The PR instrument performed nominally during this period. The list of Internal Calibration times over Australia in which PR was not radiating is shown below:

2001-085/06:06:45z - 06:08:56z	2001-088/20:27:16z - 20:28:41z
2001-085/22:24:38z - 22:29:42z	2001-089/04:28:56z - 04:31:03z
2001-086/04:55:13z - 04:57:27z	2001-090/03:17:28z - 03:19:41z
2001-087/05:17:51z - 05:19:59z	2001-090/19:36:27z - 19:40:00z
2001-087/21:36:14z - 21:38:39z	2001-091/03:42:13z - 03:42:13z
2001-088/04:06:28z - 04:08:41z	

TMI

The TMI instrument performed nominally during this period.

VIRS

The VIRS instrument performed nominally during this period.

GROUND SYSTEM

01-086 (Tuesday, March 27th)

Release 9.0 was installed on String 3 and continues to be evaluated by Mission Planning. It will then be made operational on all three strings, once verification has been completed.

The new PACOR-A PC has arrived in the MOC. Acceptance testing will begin and will include PACOR telemetry monitoring and level-0 data file requests once it is fully configured.

Event Reports

No new Event Reports were generated during this period.

Generic Late Acquisition Reports (for TTRs 19639)

GLA #90: TDRS 171 SA1 01/079 acquired at 10:42:37z (157 sec late).

New Anomalies

No new anomalies occurred during this period.

Recurring/Open Anomalies

No open anomalies recurred during this period.

Prepared by:
Mark Fioravanti II
TRMM Systems Engineer

Approved by:
Lou Kurzmilller
FOT Manager